BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

(12) UK Patent Application (19) GB (11) 2 371 736 (13) A

(43) Date of A Publication 07.08.2002

(21) Application No 0102478.5

(22) Date of Filing 31.01.2001

(51) INT CL[7]
A47B 81/06 // G11B 33/04

(52) UK CL (Edition T)
A4B B9B1 B9B2 B9B3 B9B4 B9B5 B9F10 B9F3 B9F9

(71) Applicant(s)
Jackson Yu
2F No 19 Fu-Hsing Rd, Peitou Dist, Taipei City, Taiwan

(72) Inventor(s)
Jackson Yu

(74) Agent and/or Address for Service
Venner Shipley & Co
20 Little Britain, LONDON, EC1A 7DH,
United Kingdom

(56) Documents Cited
GB 2275180 A
GB 0846867 A
EP 1001426 A2
US 6109707 A
US 4733925 A
GB 2267214 A
EP 1018744 A2
WO 1985/002330 A
US 5769516 A

(58) Field of Search
UK CL (Edition S) A4B B9F3
INT CL[7] A47B 81/06 , G11B 33/02 33/04
Online: EPODOC, PAJ & WPI

(54) Abstract Title
Recording media storage unit

(57) A storage assembly for holding recording media includes a main body 20 defining a first storage space 21 (and a first opening 206 for access in to this space), a door unit 30 mounted on to the main body (via a periphery of opening 206) which comprises a frame 31 and a second storage unit 33 (having space 330 and a second opening 331) which projects in a transverse direction relative to frame 31. Door unit 30 is moveable relative to the main body 20 and when closed, the attached second storage unit 33 extends in to the first storage space 21. Door frame 31, having a third opening 310, may also include a transparent door panel (50, fig 3) which is pivotally mounted for closing this latter opening. The inner faces 33L, 33R, of the vertical walls of the first storage space 21 have a plurality of vertically spaced ribs 332, forming a plurality of retention slots 333 to accommodate media of sufficient dimensions. The door frame may include a pivoted panel, a flexible panel (50, fig 4) which is slidably mounted on guide rails (312, fig 4), two slidable panels (50, fig 5), stacked rectangular draws (60, fig 6), stacked V-shaped draws (60, fig 7), internal (fig 8)/external (fig 9) horizontal partitions attached to a door plate (31, figs 8 and 9) reinforced with vertical rods (338, figs 8 and 9) or a cabinet with pivotal mounted door panels (figs 10A and B).

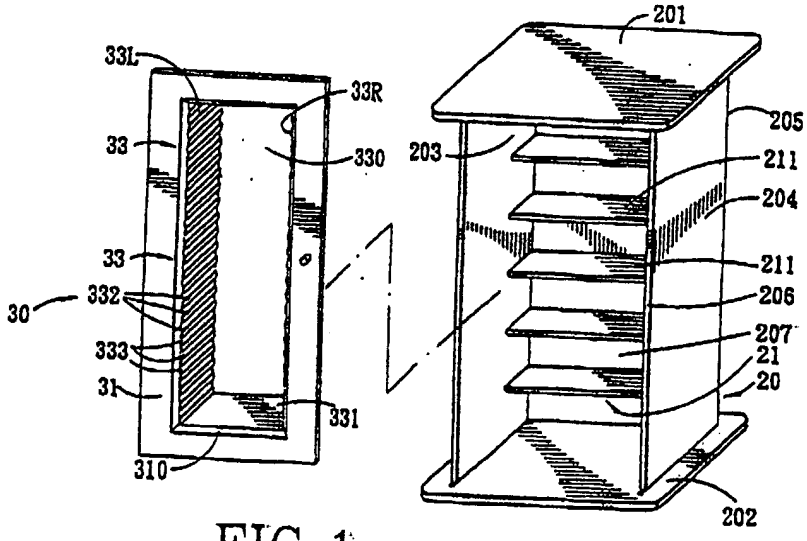

FIG. 1

GB 2 371 736 A

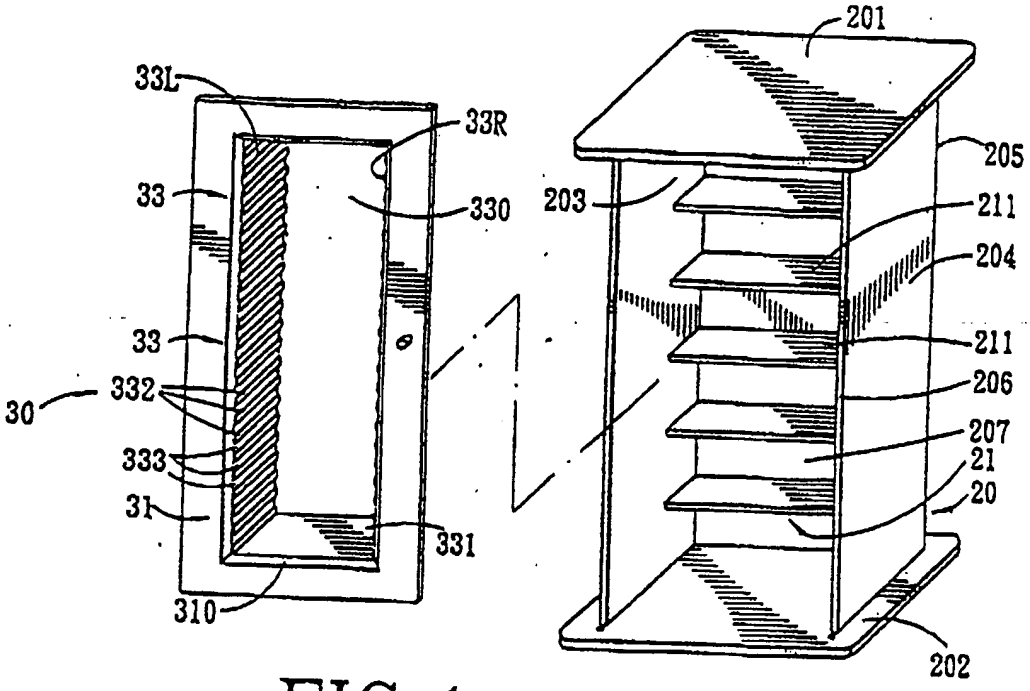
33L
33R
33
330
33
30
332
333
31
331
310
201
205
203
211
204
211
206
207
21
20
202

FIG.1

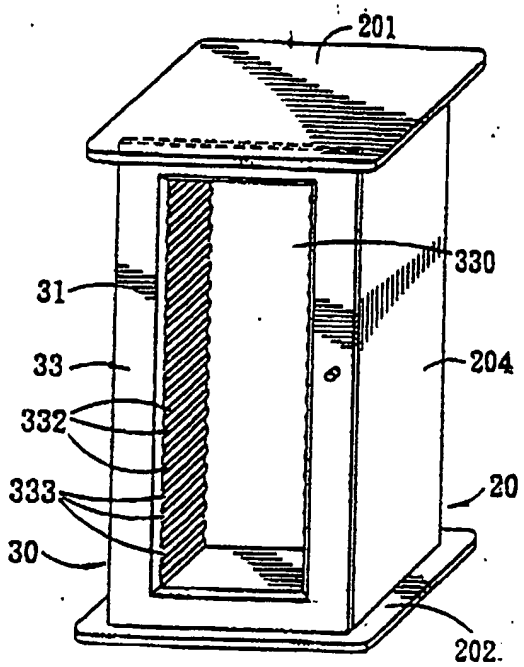
201
330
31
33
204
332
333
20
30
202

FIG.2

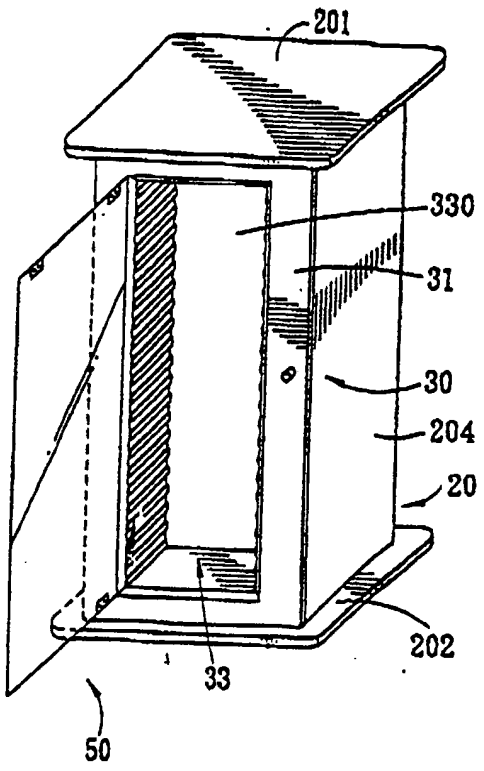

FIG.3

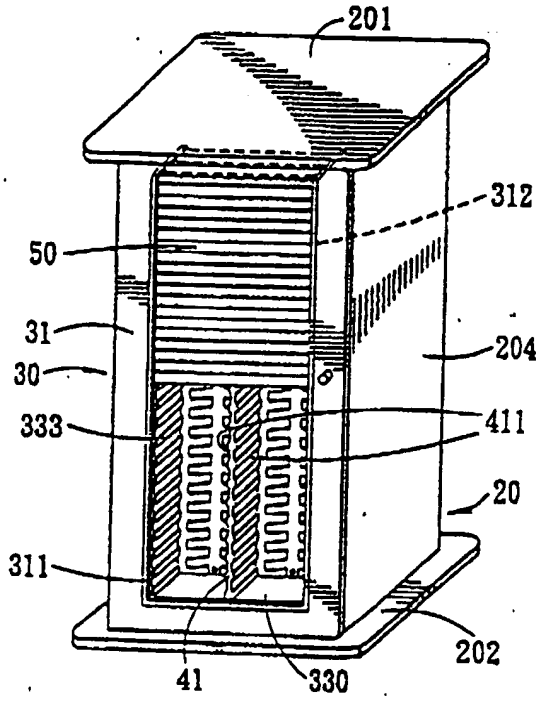
201
312
50
31
30
204
333
411
20
311
202
41
330

FIG.4

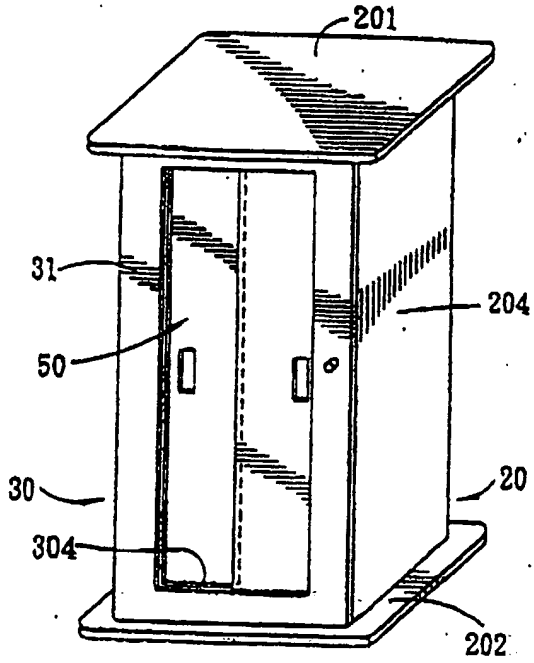
201
31
204
50
30
20
304
202

FIG.5

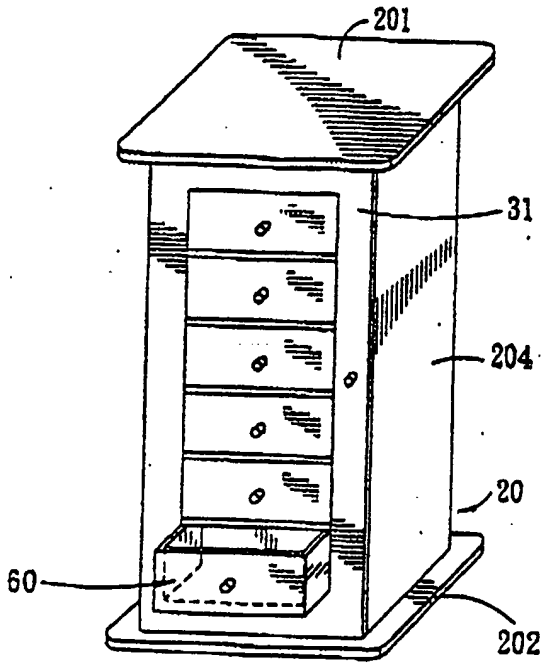

FIG.6

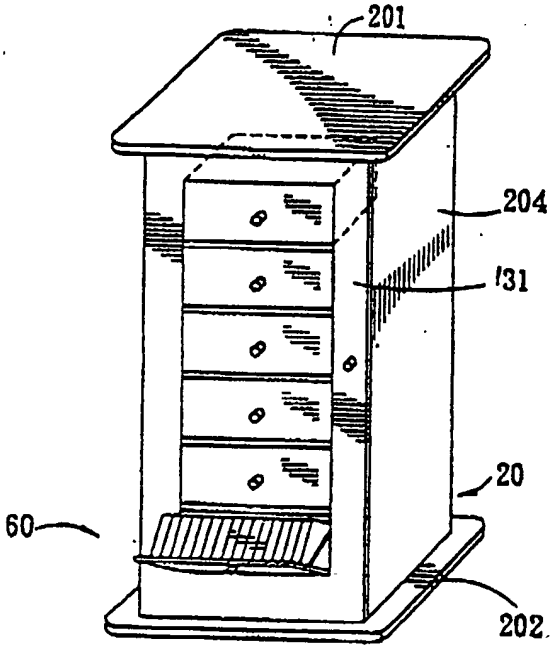

FIG.7

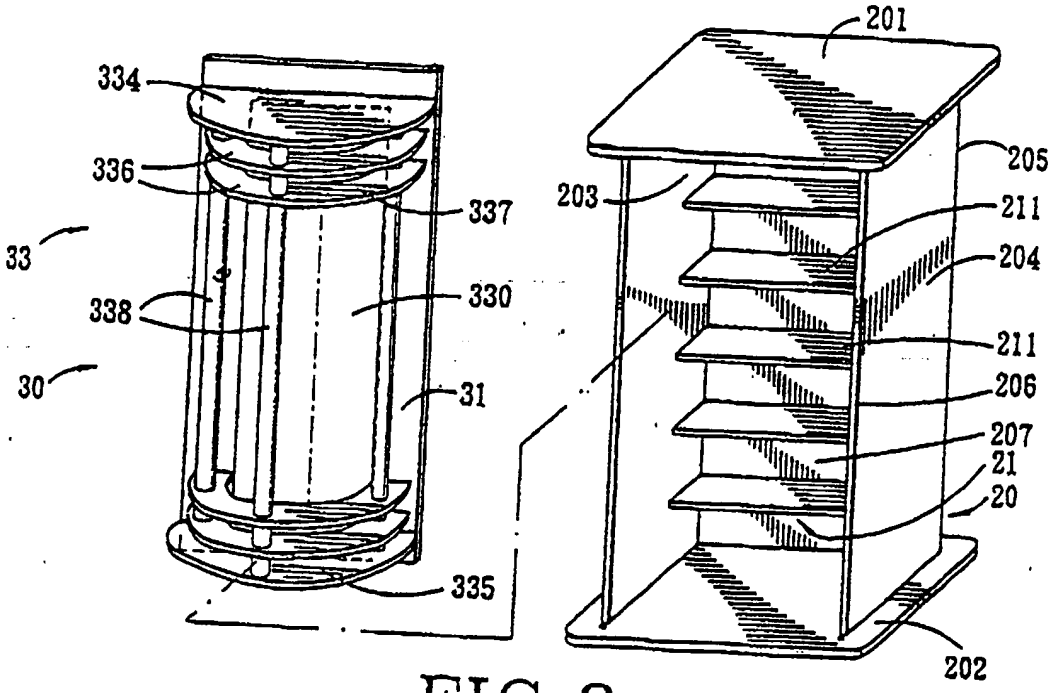
334
336
337
33
338
330
30
31
335
201
205
203
211
204
211
206
207
21
20
202

FIG.8

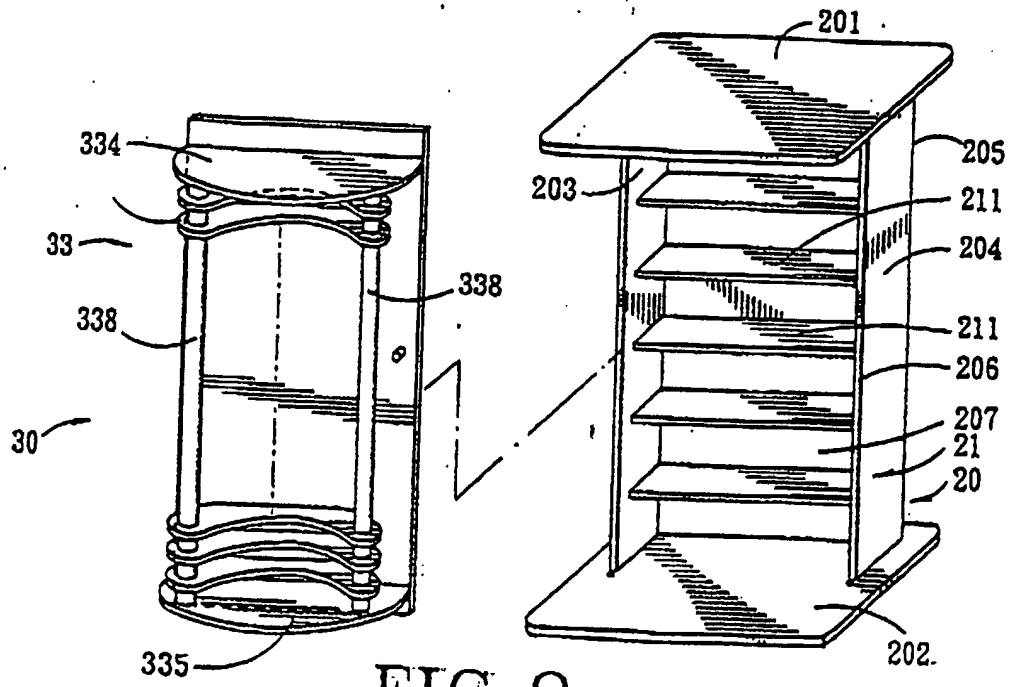
334
33
338
338
30
335
201
205
203
211
204
211
206
207
21
20
202

FIG.9

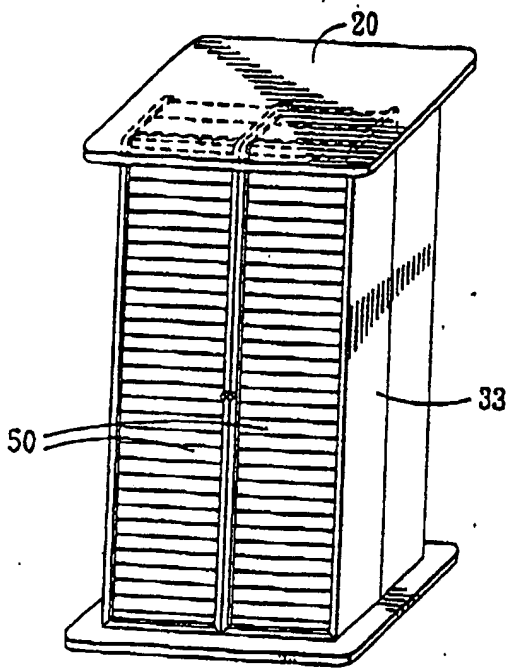

FIG. 10A

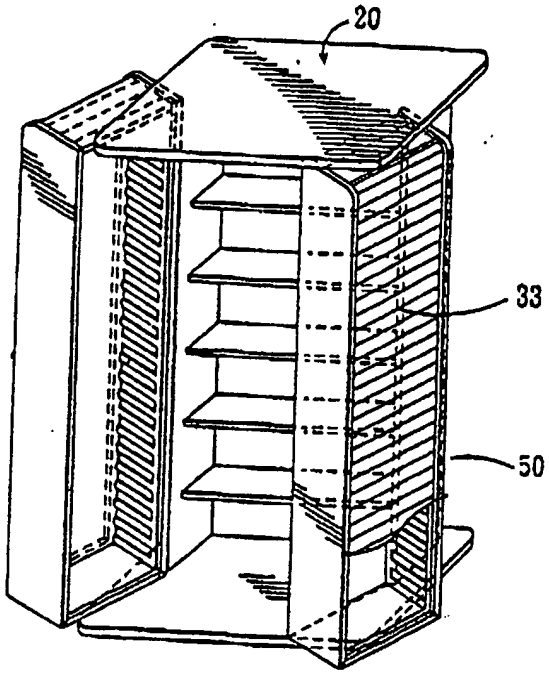

FIG. 10B

2371736

STORAGE ASSEMBLY FOR HOLDING RECORDING MEDIA

This invention relates to a storage assembly, more particularly to a storage assembly for holding recording media, such as laser discs, CD, VCD, DVD, audio recording tapes and video recording cartridges.

A storage assembly for holding recording media is known in the art, and includes a casing of predetermined size and dimension such that consumers can select the size of the storage assembly according to their needs. The recording media, such as floppy discs, recording tapes and video cartridges, CD, VCD, DVD are of different dimensions and sizes. A conventional storage assembly generally defines a plurality of identical compartments therein. Thus, the compartments can only accommodate a particular type of the recording media. As a result, the consumer needs to purchase storage assemblies of different sizes and dimensions for accommodating different types of recording media.

The object of this invention is to provide a storage assembly that is adapted to accommodate different types of recording media.

According to one aspect of the present invention, a storage assembly for holding recording media includes a main body and a door unit. The main body defines a first storage space therein, and has a first opening for access into the first storage space. The door unit is mounted on the main body, and is movable relative to the main body between an open position, where access into the first storage space via the first opening is possible, and a closed position, where access into the first storage space via the first opening is denied. The door unit includes a door frame and a storage unit. The door frame is attached to a periphery of the first opening, and has an outer surface, and an inner surface opposite to the outer surface and facing toward the main body. The storage unit projects from the inner surface of the door frame in a transverse direction relative to the door frame into the first storage space of the main body when the door unit is at the closed position. The storage unit defines a second storage space, and has a second opening for access into the second storage space.

According to another aspect of the present invention, the storage assembly for holding recording media includes a main body and a door unit. The main body defines a first storage space therein, and has a first opening for access into the first storage space. The door unit is mounted on the main body, and is movable relative to the main body between an open position, where access into the first storage space via the first opening is possible, and a closed position, where access into the first storage space via the first opening is denied. The door unit includes a door plate and a storage unit. The door plate is attached to a periphery of the first opening, and has an outer surface, and an inner surface that is opposite to the outer surface and that faces toward the main body. The storage unit projects from a selected one of the inner and outer surfaces of the door plate in a transverse direction relative to the door plate. The storage unit defines a second storage space, and has a second opening for access into the second storage space.

The first storage space of the main body is divided into a plurality of major compartments so that recording tapes and video cartridges can be kept in the major compartments.

The second storage space of the storage unit is divided into a plurality of disc-retention slots such that recording media of relatively small thickness and relatively small size, such as floppy discs, CD, VCD and DVD can be stored kept in the retention slots.

These and other features and advantages of this invention will become apparent in the following detailed description of the preferred embodiments of this invention, with reference to the accompanying drawings, in which:

Figure 1 is an exploded perspective view of a first preferred embodiment of a storage assembly for recording media according to the present invention;
Figure 2 is a perspective view of the first preferred embodiment;
Figure 3 is a perspective view of a second preferred embodiment of a storage assembly for recording media according to the present invention;

Figure 4 is a perspective view of a third preferred embodiment of a storage assembly for recording media according to the present invention;

Figure 5 is a perspective view of a fourth preferred embodiment of a storage assembly for recording media according to the present invention;

Figure 6 is a perspective view of a fifth preferred embodiment of a storage assembly for recording media according to the present invention;

Figure 7 is a perspective view of a sixth preferred embodiment of a storage assembly for recording media according to the present invention;

Figure 8 is an exploded perspective view of a seventh preferred embodiment of a storage assembly for recording media according to the present invention;

Figure 9 is an exploded perspective view of an eighth preferred embodiment of a storage assembly for recording media according to the present invention; and

Figures 10A and 10B are perspective views of a ninth preferred embodiment of a storage assembly for recording media according to the present invention.

Before the invention is described in greater detail, it should be noted that same reference numerals have been used to denote the same elements throughout the entire specification.

Referring to Figures 1 and 2, the first preferred embodiment of a storage assembly for recording media according to the present invention is shown to include a rectangular main body 20 and a door unit 30.

As illustrated, the main body 20 has a top wall 201, a bottom wall 202, left and right walls 203,204 and a rear wall 205 which cooperatively define a first storage space 21 therein, and a first opening 206 for access into the first storage space 21. A plurality of identical shelves 211 are fixed on the rear wall 205 so as to divide the first storage space 21 into a plurality of major compartments 207 so that recording tapes and video cartridges can be stored in the major compartments 207.

The door unit 30 is mounted on the main body 20 in such a manner that the door unit 30 is movable relative thereto between an open position (not shown), where access into the major compartments 207 via the first opening 206 is possible, and a

closed position, as shown in Figure 2, where access into the major compartments 207 via the first opening 206 is denied.

In the first preferred embodiment, the door unit 30 includes a rectangular door frame 31 and a storage unit 33. The door frame 31 is attached to a periphery of the first opening 306, and has an outer surface, and an inner surface which is opposite to the outer surface and which faces the main body 20. The storage unit 33 projects from the inner surface of the door frame 31 in a transverse direction relative to the door frame 31 into the first storage space 21 of the main body 20 when the door unit 30 is at the closed position.

The storage unit 33 defines a second storage space 330, and has a second opening 331 for access into the second storage space 330. The door frame 31 defines a third opening 310 that faces and that conforms with the second opening 331. The storage unit 33 preferably includes left and right side walls (33L,33R) that are parallel to each other and that project from two opposite sides of the door frame 31 in the transverse direction into the first storage space 21 of the main body 20 to define therebetween the second storage space 330. A plurality of vertically spaced apart left ribs 332 are formed on an inner face of the left side wall (33L), and extend in the transverse direction. A plurality of vertically spaced apart right ribs 332 are formed on an inner face of the right side wall (33R), and extend in the transverse direction. The right ribs 332 complement with the left ribs 332 to form a plurality of retention slots 333 therebetween such that recording media of relatively small thickness but with relatively large size, such as laser discs can be kept in the retention slots 333.

Referring to Figure 3, a second preferred embodiment of the present invention is shown to be similar to the first preferred embodiment in construction, except that a transparent door panel 50 is mounted pivotally on the door frame 31 for closing the third opening 310.

Referring to Figure 4, a third preferred embodiment of the present invention is shown to be similar to the second preferred embodiment in construction. The main

difference resides in that the door frame 31 includes left and right inner side walls 311 which confine the third opening 310 (see Figure 1), and left and right guide rails 312 which extend along the left and right inner side walls 311 and into the first storage space 21 of the main body 20 (see Figure 1). A flexible door panel 50 is mounted slidably on the guide rails 312 for closing the third opening 310. Preferably, an intermediate partition 41 is disposed uprightly within the second storage space 330, and has vertically spaced apart left and right ribs 411 which complement with the left and right ribs 332 of the left and right side walls (33L,33R) of the storage unit 33 to define disc-retention slots 333 such that recording media of relatively small thickness and relatively small size, such as floppy discs, CD, VCD and DVD, can be stored in the retention slots 333.

Referring to Figure 5, a fourth preferred embodiment of the present invention is shown to be similar to the third preferred embodiment in construction, except that the door frame 31 is formed with top and bottom inner side walls which confine the third opening 310 (see Figure 1), top and bottom guide rails 304 which extend along the top and bottom inner side walls, and two slidable door panels 50 mounted slidably on the top and bottom guide rails 304 for closing the third opening 310 (see Figure 1). Relative movement between the door panels 50 on the guide rails 304 results in partially uncovering of the third opening 310.

Figure 6 shows a fifth preferred embodiment of the present invention, which is similar to the fourth preferred embodiment in construction. The main difference resides in that a plurality of rectangular drawers 60 are mounted slidably on the left and right side walls (33L, 33R) of the storage unit 33 (see Figure 1) in a stacked manner and extend into the second storage space. The drawers 60 have outer ends received fittingly in the third opening 310 (see Figure 1) of the door frame 31 and substantially flush with the door frame 31 and the outer end of the main body 20 when the door unit 30 is at the closed position.

Figure 7 shows a sixth preferred embodiment of the present invention, which is similar to the fifth preferred embodiment in construction. The main difference resides in that a plurality of V-shaped drawers 60 are mounted turnably on the left

and right side walls (33L,33R) of the storage unit 33 (see Figure 1) in a stacked manner, and have outer ends received fittingly in the third opening 310 and substantially flush with the door frame 31 and the outer end of the main body 20 when the door unit 30 is at the closed position.

Referring to Figure 8, a seventh preferred embodiment of the present invention is shown to include a rectangular main body 20 and a door unit 30. Since the structure of the main body 20 and its connection to the door unit 30 are the same as those of the first preferred embodiment, a detailed description thereof is omitted herein for the sake of brevity. The door unit 30 of this embodiment includes a flat door plate 31, and a storage unit 33 which projects from the inner surface of the door plate 31 in a transverse direction relative to the door plate 31. The storage unit 33 defines a second storage space 330, and has a second opening for access into the second storage space 330. The storage unit 33 includes horizontal top and bottom plates (334,335), and a plurality of vertically spaced apart horizontal partitions 336. The top and bottom plates 334,335 are fixed on the inner surface of the door plate 31, and project in the transverse direction into the first storage space of the main body 20 to confine the second storage space 330. The horizontal partitions 336 are disposed between the top and bottom plates 334,335 so as to divide the second storage space 330 into a plurality of parallel compartments 337 accessible via the second opening. A plurality of vertical rods 338 extend through the partitions 336, and are fastened securely to the top and bottom plates 334,335 in order to reinforce the partitions 336.

Referring to Figure 9, an eighth preferred embodiment of the present invention is shown to be similar to the seventh preferred embodiment in construction. The main difference resides in that storage unit 33 is fixed on an outer surface of the door plate 31 instead of the inner surface of the door plate 31.

Referring to Figures 10A and 10B, a ninth preferred embodiment of the present invention is shown to include a main body 20 and a storage unit 33. The main body 20 defines a first storage space therein, and has a first opening for access into the first storage space. The storage unit 33 is mounted pivotally on the main body 20

for covering the first opening, and includes a pair of cabinets defining therein a second storage space and a second opening for access into the second storage space. A door panel 50 is mounted on each cabinet for covering the second opening.

With this invention thus explained, it is apparent that numerous modifications and variations can be made without departing from the scope and spirit of this invention. It is therefore intended that this invention be limited only as indicated by the appended claims.

Claims

1. A storage assembly for holding recording media, comprising a main body 20 defining a first storage space therein, and having a first opening for access into said first storage space, and a door unit 30 mounted on said main body 20 and movable relative to said main body between an open position, where access into said first storage space via said first opening is possible, and a closed position, where access into said first storage space via said first opening is denied, said door unit including a door frame attached to a periphery of said first opening, and having an outer surface, and an inner surface opposite to said outer surface and facing toward said main body, and a storage unit 33 projecting from said inner surface of said door frame in a transverse direction relative to said door frame into said first storage space of said main body when said door unit is at said closed position, said storage unit 33 defining a second storage space and having a second opening for access into said second storage space.

2. The storage assembly as defined in claim 1, wherein said door frame defines a third opening facing and conforming with said second opening, said storage unit including left and right side walls that are parallel to each other and that project from two opposite sides of said door frame in said transverse direction into said first storage space to define therebetween said second storage space, and a plurality of vertically spaced apart left ribs formed on an inner face of said left side wall and extending in said transverse direction, and a plurality of vertically spaced apart right ribs formed on an inner face of said right side wall and extending in said transverse direction and complementing with said left ribs to form a plurality of slots therebetween.

3. The storage assembly as defined in claim 2, wherein said door frame further includes a transparent door panel mounted pivotally thereto for closing said third opening.

4. The storage assembly as defined in claim 2, wherein said door frame includes left and right inner side walls which confine said third opening; left and right guide

rails extending along said left and right inner side walls and into said main storage space, and a flexible door panel mounted slidably on said guide rails for closing said third opening.

5. The storage assembly as defined in claim 2, wherein said door frame further includes top and bottom inner side walls which confine said third opening, top and bottom guide rails respectively extending along said top and bottom inner side walls, and two slidable door panels mounted slidably on said top and bottom guide rails for closing said third opening.

6. The storage assembly as defined in claim 1, wherein said door frame defines a third opening facing and conforming with said second opening, said storage unit including left and right side walls that are parallel to each other and that project from two opposite sides of said door frame in said transverse direction into said first storage space to define therebetween said second storage space, and a plurality of stacked rectangular drawers mounted slidably on said left and right side walls and having outer ends received fittingly in said third opening and substantially flush with said door frame when said door unit 30 is at said closed position.

7. The storage assembly as defined in claim 1, wherein said door frame defines a third opening facing and conforming with said second opening, said storage unit including left and right side walls that are parallel to each other and that project from two opposite sides of said door frame in said transverse direction into said first storage space to define therebetween said second storage space, and a plurality of stacked V-shaped drawers mounted turnably on said left and right side walls and having outer ends received fittingly in said third opening and substantially flush with said door frame when said door unit 30 is at said closed position.

8. A storage assembly for holding recording media, comprising a main body 20 defining a first storage space therein, and having a first opening for access into said first storage space, and a door unit 30 mounted on said main body 20 and movable relative to said main body between an open position, where access into said first storage space via said first opening is possible, and a closed position, where access

into said first storage space via said first opening is denied, said door unit including a door plate attached to a periphery of said first opening, and having an outer surface, and an inner surface opposite to said outer surface and facing toward said main body, and a storage unit 33 projecting from a selected one of said inner and outer surfaces of said door plate in a transverse direction relative to said door plate, said storage unit 33 defining a second storage space and having a second opening for access into said second storage space.

9. The storage assembly as defined in claim 8, wherein said storage unit includes horizontal top and bottom plates fixed on said inner surface of said door plate and projecting in said transverse direction into said first storage space to confine said second storage space, a plurality of vertically spaced apart horizontal partitions disposed between said top and bottom plates so as to divide said second storage space into a plurality of parallel compartments accessible via said second opening, and a plurality of vertical rods 333 extending through said partitions and fasten to said top and bottom plates in order to reinforce said partitions.

10. The storage assembly as defined in claim 8, wherein said storage unit includes horizontal top and bottom plates fixed on said outer surface of said door plate and projecting in said transverse direction to confine said second storage space, a plurality of vertically spaced apart horizontal partitions disposed between said top and bottom plates so as to divide said second storage space into a plurality of parallel compartments accessible via said second opening, and a plurality of vertical rods 333 extending through said partitions and fasten to said top and bottom plates in order to reinforce said partitions.

11. A storage assembly for holding recording media, comprising a main body 20 defining a first storage space therein, and having a first opening for access into said first storage space, and a storage unit mounted pivotally on said main body for covering said first opening, and having a cabinet defining therein a second storage space and a second opening for access into said second storage space, and a door panel for covering said second opening.

INVESTOR IN PEOPLE

Application No: GB 0102478.5
Claims searched: All (1-11)

Examiner: David J Evans
Date of search: 26 March 2001

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): A4B (B9F3)

Int Cl (Ed.7): G11B (33/02, 33/04); A47B (81/06)

Other: Online: EPODOC, WPI, & PAJ

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
Y	GB 2275180 A	(CALDWELL) see abstract and figs 2 & 4.	7
Y	GB 2267214 A	(SUN) see whole document.	2 & 4
X	GB 846867 A	(DOBSON) in particular see fig 1.	8
A	WO 85/02330	(TORSSONEN) in particular see figs 3A-C	-
Y	EP 1001426 A2	(EXPONENT) in particular see figs 1 & 7.	6
Y	EP 1018744 A2	(SUNHING) see figs 1-3, 7-8, 12, 18 and abstract.	9
Y	US 6109707 A	(OZAKI) see abstract.	6
X, Y	US 5769516 A	(AGUILERA) whole document relevant.	X = 1 & 8 Y=2,4 & 6-7 & 9
Y	US 4733925 A	(DURAN) in particular see fig 3 and abstract.	7

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.